INSPIRE

Infrastructure for Spatial Information in Europe

The development of a European Common Green Deal data space

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Description	Description of the concept behind the European Green Deal data space and its implementation track, the importance of the INSPIRE Directive to bring public data into the data space and the GreenData4All as a process to evaluate and possibly review the current legal framework.

The purpose of this document is to provide a policy background to the discussion in the MIG on the role of the INSPIRE Directive in the larger framework of European digital initiatives and legislation and the possible policy options (scope) to be explored in the GreenData4All impact assessment. |
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1. A COMMON EUROPEAN GREEN DEAL DATA SPACE

In December 2019 the European Commission (EC) unveiled its flagship plan to tackle environmental degradation and climate change, the European Green Deal (EGD). Through this plan, the European Union aims to become the first resource-efficient and competitive economy without net emissions of greenhouse gases by 2050. Data and services will be critical to achieve this goal. Europe's green transition will depend on a parallel digital transition, and both will be defining challenges for this generation. The EGD requires investment in technologies and digital assets that are a critical enabler for attaining the sustainability goals of the EGD in many different sectors. Digitalisation presents new opportunities for environmental and energy consumption monitoring and Europe needs a digital sector that puts sustainability and data at its heart. However, implementation of the EGD vision presents significant challenges due to the vast amount of diverse and distributed data resources from many stakeholders, different sectors, application domains and governance schemes.

Figure 1: Twin green and digital transition

The **European Strategy for data of 19 February 2020**[1] announced that to speed up the development of the European economy and to harness the value of data for the benefit of the European society, the Commission will invest in common European data spaces in strategic economic sectors and domains of public interest. The Data Strategy indicated that it would initially support **nine data spaces (including a Green Deal data space)**, however, additional data spaces could follow to ultimately create a **European data space – a genuine single market for data.**
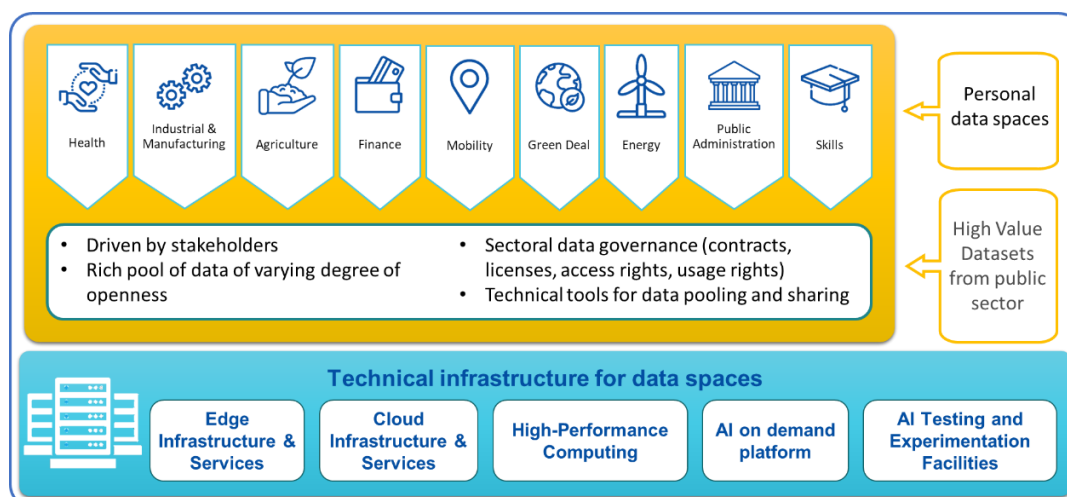

Figure 2: One European Common Data Space implemented through sectorial data space initiatives

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[1] COM (2020) 66 final

Data has an ever-growing impact on how we produce, consume, and live our lives. The list of economic and social benefits of common European data spaces is long and ranges from more conscious energy consumption through digitalisation of energy grids, to smart mobility, precision agriculture, better healthcare and the development of high precision digital models of the Earth (Digital Twins, e.g. "Destination Earth") to anticipate, monitor, better understand, and react to the environmental and climate change challenges ahead of us, including to anticipate eventual disasters and crises.

The development of **common European data spaces in strategic sectors** and domains will constitute an important contribution **to accelerating digital transformation** in these fields and realising the digital decade objectives[2]. Data and its socio-economic potential enhanced by the creation of common European data spaces have an essential role to play both in Europe's digital transformation and economic recovery plans. As envisioned in the European strategy for data, **the different data spaces will be interconnected so that they progressively lead to a genuine European space** in which data is broadly shared and used, while fully respecting the rights of individual persons and businesses over data. This will allow the full benefits of data to be reaped for the European economy, society, and research.

European Green Deal Data Space infrastructure

Through **the Digital Europe Programme (DIGITAL), the Commission will fund the creation of common European data spaces in specific sectors**, such as the Green Deal Data Space, where the EU financial contribution will have an impact on their **deployment as European digital infrastructures.** These data spaces will be based on the common data infrastructure procured by the Commission to assure interoperability across sectors.

Figure 3: The Green Deal Data Space

According to the European Strategy for Data, **the Green Deal Data Space (GDDS)** will be **a common infrastructure that will allow industries, governments, and researchers to access the high quality, interoperable data and related services, and give data holders and providers tools to manage, control and provide access to their data**. The GDDS is expected to solve the problems of fragmentation and inconsistency by supporting **sharing of data**, across silos and islands, **flexible data processing**, **respecting the rights of data holders** to make decisions about how their data is used, as well as more generally **respecting European values**. The Green Deal Data Space **key data resources, applications and algorithms** from different sectors should be **discoverable, accessible, interoperable, and reusable in a common Green Deal Data Space (GDDS),** a federation of data ecosystems empowering policy makers, business, researchers, and citizens, from Europe and around the world, to jointly tackle climate change, circular economy, zero pollution, biodiversity protection, deforestation and compliance assurance.

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[2] 2030 Digital compass: the European way for the digital decade, COM (2021) 118 final.

The creation of a common European data space in general and a GDDS in specific, is a pioneering venture. The **multitude of sectors and domains** involved, each of them with their own characteristics and specific data (e.g., environmental data, personal health data, industrial manufacturing data, sustainable financing data) including appropriate reuse modalities for a range of different use cases, as well as the high number of interested stakeholders, make it a challenging endeavour. The complexity of **diverse use cases, relevant actors with diverging interests in the data use and specific data needs** might be hard to reconcile. A one-size fits all approach, encompassing both the necessary technical data infrastructure and governance framework, has its limitations in terms of being able to meet the specific needs of each vertical sector or domain. Moreover, it is clear that there will be meaningful **overlaps between different sectorial approaches**, and it will be key to identify cross-sector commonalities and to developing, where possible, common concepts, models and building blocks that can be used in various sectors or domains to promote the reuse of infrastructure, data and solutions (see Figure 4).
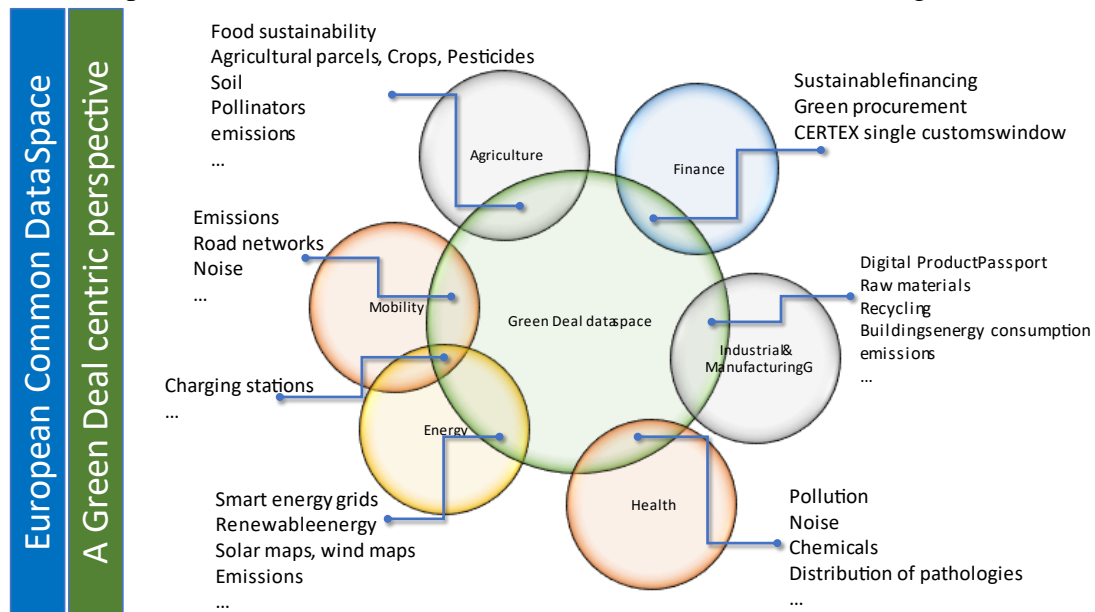

Figure 4: Interoperability and collaboration will be key to guarantee the free flow of data across sectorial data space initiatives) – This figure is in no way complete. Its purpose is to demonstrate the need for interoperability.

Development of the Green Deal Data Space

The GDDS will be developed in phases. The first phase, under DIGITAL Work Programme 2021-2022[3], will prepare the ground and bring the relevant stakeholders together **to develop a blueprint and a roadmap for the data governance and technical architecture of the GDDS**.

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[3] European Commission, *Preparatory actions for the Green Deal data space*, see *here*.

- Legislative initiative: GreenData4All

- First round of DEP Call CSA- Preparatory actions for the Green Deal Data Space (ca. 2M€)
  (starting fall 2022– duration 18 months)
  alongside with Support Centre Call and other thematic data space calls
- Second round of Dep calls starting >
  Implementing actions for the Green Deal Data Space (ca. 8M €)

- Complemented by Horizon Europe calls (HORIZON-CL6-2021-GOVERNANCE-01-17)
  and other support project support projects building data ecosystems and common methodologies

- Supporting role of the **GD Task Force** as a **sounding board and project steering group** for the
  Green Deal data space CSA and the GreenData4All is under development

European Environment Agency

DG ENV.01 is co-leading, together with DG CNECT.G1 and DG CLIMA, on the development of the GDDS that will be addressed through the Digital Europe Programme (DEP) Coordinated Support Action (CSA) on the "Preparatory actions for the Green Deal Data Space"[4] (Q4 2022 – Q2 2024) under the DIGITAL Work Programme 2021-2022.

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[4] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/digital-2021-cloud-ai-01-prep-ds-green-deal

2. GreenData4All – legislative component

As announced in the European strategy for data, **the Commission will assess, in the context of the 'GreenData4All' initiative[5], the interaction between the INSPIRE Directive[6] and the Directive on public access to environmental information**[7]. The aim is to review both Directives, following their recent evaluation[8], to align them with the current state of IT technology and to promote the active dissemination and sharing of public, privately held and citizen-generated data in support of the EGD objectives. This will contribute to the definition and operationalisation of legal, organisational, and technical interoperable building blocks to share data in a machine-readable, agile and user-driven way at the point of use in the GDDS[9]. It will also support a phased and needs-driven roll-out of re-usable data services that are essential for monitoring and reaching environmental objectives set out in, for example, biodiversity, resilience to climate change, circular economy and zero pollution strategies.

The GreenData4All initiative aims to support the development of the GDDS by reviewing two pieces of existing legislation to bring, at a minimum, public environmental data into the GDDS:

- Directive 2007/02/EC: establishes an Infrastructure for Spatial Information in the European Community (INSPIRE). It promotes the sharing of geospatial data to support European Union (EU) environmental policies and policies or activities which may have an impact on the environment. INSPIRE is based on the infrastructures for spatial information established and operated by the Member States of the European Union.

- Directive 2003/4/EC: on public access to environmental information implements parts of the Aarhus Convention[10] relating to information that authorities must make available to the public. The provisions in the Directive date almost 20 years back.

These two legal instruments are the backbone of the environmental information management system covering the whole of the EU's environmental policy. The instruments require Member States to provide access to environmental information in an easily understandable, user-friendly manner. This means sharing information between public authorities, for instance when managing cross-border crises (e.g. floods). The framework facilitates public access to spatial information, with a view to involve members of the public further into decision-making.

The evaluation of the INSPIRE Directive and specific parts of the Public Access to Environmental Information Directive is finished and the evaluation Staff Working

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[5] COM/2020/66 final.

[6] OJ L 108, 25.4.2007, p. 1–14.

[7] OJ L 41, 14.2.2003, p. 26–32.

[8] European Commission, *Sharing geospatial data on the environment – evaluation (INSPIRE Directive)*, see *here*.

[9] Kotsev A., Minghini M., Cetl V., Penninga F., Robbrecht J. and Lutz M., *INSPIRE - A Public Sector Contribution to the European Green Deal Data Space*, EUR 30832 EN, Publications Office of the European Union, Luxembourg, 2021.

[10] https://eur-lex.europa.eu/eli/dec/2005/370/oj

Document (SWD) was published on the "Have your say" website[11] in July 2022. The report of the supporting study[12] was already published earlier on the website of the Publications Office.

The evaluation of the INSPIRE Directive demonstrated that the Directive is still very relevant for addressing data sharing obstacles from the past and data needs for the future. Against this increasing relevance, it was also shown that the legal framework can be improved in terms of its effectiveness. It was suggested that modernisation supported by improved implementation could render the intervention a key instrument to make the necessary data available needed to address environmental challenges, increase environmental democracy and strengthen the emerging data economy.

With the closure of the evaluation procedure, the work on a possible revision of the Directive can start, taking into consideration the findings of the evaluation and emerging digital data legislation. Next step in the process is the publication of a Call for Evidence for the GreenData4All initiative for public consultation in early 2023. The Call for Evidence will provide more details on the further timing of the initiative.

The possible revision of the legal framework should build on recent and emerging data legislation (Data Governance Act, Data Act, Open Data Directive – Implementing Regulation on High Value Datasets) to be Fit for Future (simpler to apply and comply with, more digital, and reduce any unnecessary burdens associated with it). Moreover, aligning the existing legal framework with recent and emerging horizontal digital data legislation should maximize coherence with the larger ecosystem of the European Common Dataspaces, contribute to the development of a GDDS and increase the potential for broad data reuse while minimizing implementation burden and promoting the once-only principle.

2.1. Reflections on possible directions for the evolution of the INSPIRE Directive for discussion in the MIG

Building on the outcome of the evaluation of the INSPIRE Directive and taking into consideration the fast-evolving digital landscape, the impact assessment should at least consider exploring the following specific objectives:

- Close remaining implementation gaps to effectively and efficiently make public data available needed to address environmental challenges, increase environmental democracy and strengthen the European data economy (European Common data spaces).
- Contribute to a coherent ecosystem for data sharing by pursuing maximal coherence with recent and emerging EU data legislation (Open Data Directive and its implementing Regulation on High Value datasets, Data Governance Act, Data Act).
- Make the legal framework future and technology proof in line with common implementation strategies for the European Common data spaces.

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[11]   https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12427-Sharing-geospatial-data-on-the-environment-evaluation-INSPIRE-Directive-_en

[12]   https://op.europa.eu/en/publication-detail/-/publication/bb950b05-a5a0-11ec-83e1-01aa75ed71a1/language-en/format-PDF/source-258155790

- Contribute to a European standardised framework for data reuse conditions and licensing.

One or more of the following actions could be considered in addition to a baseline scenario that would simply continue to improve the implementation and maintenance of the INSPIRE Directive and the Public Access to Environmental Information Directive without proposing new legislation:

1. **Amending requirements in the existing legislation** to align data reuse conditions and data sharing provisions (including existing provisions on metadata, data access services and interoperability) with the Open Data Directive.
2. **A mixed approach including mandatory and soft rules to better position the environmental data sharing framework in the digital strategy** within the existing scope of spatial environmental data. This could entail:
    o Better separate technological implementation choices from legal provisions to make the intervention better fit for future;
    o Allow for discretion in the application of interoperability rules by introducing soft law measures (e.g. good implementation practices, guidelines) to complement regulatory action, taking account of such factors as the nature and value of the data, current and emerging user needs or intended use;
3. **Amending the active dissemination provisions** in the Public Access to Environmental Information Directive to align with relevant provisions in the INSPIRE Directive to promote once only dissemination and reflect current state of technology.
4. To establish **an appropriate legal and governance framework to cover the access to and exchange of environmental data in support of the twin green and digital transition**, research and innovation, policy-making and regulatory activities the following further options could be considered building on the scenario in option 2:
    a) **Beyond public sector data**: regulatory provisions and soft law measures to facilitate the participation of private sector, civil society and citizens as data providers or as data intermediaries, building on the framework provided by the Data Governance Act and the Data Act.
    b) **Beyond spatial data**: regulatory provisions extending the data scope of the INSPIRE Directive and its annexes beyond spatial data to also cover the environmental information as defined in Article 2 of Directive 2003/4/EC of the European Parliament and of the Council. Aligning scope and process to sharing environmental information will minimize implementation burden and will be more effective in bringing public environmental data into the Green Deal data space.
    c) **Beyond public sector spatial data**: a combination of both options 4.a and 4.b to foster **a genuine digital marketspace for green data** enhancing the availability, accessibility and application of trustworthy green deal data products and services in support of the twin green and digital transition.

2.2. How will we involve the MIG, the INSPIRE community, socio-economical stakeholders and the larger public in the impact assessment?

In parallel to the publication of a call for evidence, the Commission will also launch a 12-week public consultation to gather the views of a variety of stakeholders.

In the context of the impact assessment, the Commission will collect evidence through interviews with experts covering different domains. Workshops with experts and targeted online consultations will also be held.

Through these consultations, the Commission will gather stakeholders' views on the identified issues in the evaluation of the INSPIRE Directive, the challenges of the fast-evolving European information landscape and the possible policy approaches to address any remaining issues and turn the challenges into opportunities. The consultation will also seek to gather evidence and data to further explore and underpin advantages and disadvantages of possible policy options.

Furthermore, the Commission will also inform the MIG about progress and deliverables and call upon its experts to validate or discuss deliverables and findings. The MIG will be used as an important sounding board during the impact assessment.